

WHAT IS CLAIMED IS:

- 1 1. A method for allocating resources, comprising:
2 allocating reserved resources to one or more depth levels, wherein the reserved
3 resources form one or more reserved pools;
4 upon receiving a request for allocation of resources, determining a depth level
5 from which to allocate resources; and
6 allocating a reserved pool from the determined depth level.

- 1 2. The method of claim 1, further comprising:
2 generating control structures that indicate which resources are allocated to which
3 processes.

- 1 3. The method of claim 1, wherein the allocations occur at a first cluster and
2 further comprising:
3 at the first cluster, waiting for a second cluster to finish initialization processing
4 before allowing requests for resources to be processed at the first cluster.

- 1 4. The method of claim 1, further comprising:
2 when the allocation of the reserved pool is unsuccessful, attempting to allocate
3 resources from an unreserved pool.

- 1 5. The method of claim 4, further comprising:
2 when the allocation from the unreserved pool is unsuccessful, placing the request
3 in a data structure to wait for a reserved pool.

- 1 6. The method of claim 1, wherein the resources are task control blocks.

- 1 7. The method of claim 1, further comprising:

2 determining that a reserved pool at the determined depth level has been
3 allocated; and
4 allocating a resource from the reserved pool.

1 8. The method of claim 7, wherein when the request is a remote request, the
2 determined depth level is a next depth level.

1 9. The method of claim 7, wherein when the request is a local request, the
2 depth level is a current depth level.

1 10. The method of claim 7, further comprising:
2 determining that processing with the resource is complete; and
3 returning the resource to a pool of resources.

1 11. The method of claim 10, further comprising:
2 when the resource is returned to a reserved pool, determining whether all
3 resources have been returned to that reserved pool;
4 when all resources have been returned, freeing the reserved pool for allocation to
5 another process; and
6 allocating the freed reserved pool to a request waiting for allocation of a reserved
7 pool.

1 12. The method of claim 10, further comprising:
2 when the resource is returned to an unreserved pool, allocating the freed
3 unreserved pool to a request waiting for allocation of a reserved pool at a current depth
4 level.

1 13. An article of manufacture including program logic for allocating
2 resources, wherein the program logic is capable of causing operations to be performed,
3 the operations comprising:
4 allocating reserved resources to one or more depth levels, wherein the reserved
5 resources form one or more reserved pools;
6 upon receiving a request for allocation of resources, determining a depth level
7 from which to allocate resources; and
8 allocating a reserved pool from the determined depth level.

1 14. The article of manufacture of claim 13, wherein the operations further
2 comprise:
3 generating control structures that indicate which resources are allocated to which
4 processes.

1 15. The article of manufacture of claim 13, wherein the allocations occur at a
2 first cluster and wherein the operations further comprise:
3 at the first cluster, waiting for a second cluster to finish initialization processing
4 before allowing requests for resources to be processed at the first cluster.

1 16. The article of manufacture of claim 13, wherein the operations further
2 comprise:
3 when the allocation of the reserved pool is unsuccessful, attempting to allocate
4 resources from an unreserved pool.

1 17. The article of manufacture of claim 16, wherein the operations further
2 comprise:
3 when the allocation from the unreserved pool is unsuccessful, placing the request
4 in a data structure to wait for a reserved pool.

1 18. The article of manufacture of claim 13, wherein the resources are task
2 control blocks.

1 19. The article of manufacture of claim 13, wherein the operations further
2 comprise:
3 determining that a reserved pool at the determined depth level has been allocated;
4 and
5 allocating a resource from the allocated reserved pool.

1 20. The article of manufacture of claim 19, wherein when the request is a
2 remote request, the determined depth level is a next depth level.

1 21. The article of manufacture of claim 19, wherein when the request is a local
2 request, the determined depth level is a current depth level.

1 22. The article of manufacture of claim 19, wherein the operations further
2 comprise:
3 determining that processing with the resource is complete; and
4 returning the resource to a pool of resources.

1 23. The article of manufacture of claim 22, wherein the operations further
2 comprise:
3 when the resource is returned to a reserved pool, determining whether all
4 resources have been returned to that reserved pool;
5 when all resources have been returned, freeing the reserved pool for allocation to
6 another process; and
7 allocating the freed reserved pool to a request waiting for allocation of a reserved
8 pool.

1 24. The article of manufacture of claim 22, wherein the operations further
2 comprise:
3 when the resource is returned to an unreserved pool, allocating the freed
4 unreserved pool to a request waiting for allocation of a reserved pool at a current depth
5 level.

1 25. A system including circuitry for allocating resources, wherein the circuitry
2 is capable of causing operations to be performed, the operations comprising:
3 allocating reserved resources to one or more depth levels, wherein the reserved
4 resources form one or more reserved pools;
5 upon receiving a request for allocation of resources, determining a depth level
6 from which to allocate resources; and
7 allocating a reserved pool from the determined depth level.

1 26. The system of claim 25, wherein the operations further comprise:
2 generating control structures that indicate which resources are allocated to which
3 processes.

1 27. The system of claim 25, wherein the operations further comprise:
2 when the allocation of the reserved pool is unsuccessful, attempting to allocate
3 resources from an unreserved pool.

1 28. The system of claim 27, wherein the operations further comprise:
2 when the allocation from the unreserved pool is unsuccessful, placing the request
3 in a data structure to wait for a reserved pool.

1 29. The system of claim 25, wherein the operations further comprise:
2 determining that a reserved pool at the determined depth level has been allocated;
3 and

4 allocating a resource from the allocated reserved pool.

1 30. The system of claim 25, wherein when the request is a remote request, the
2 determined depth level is a next depth level and when the request is a local request, the
3 determined depth level is a current depth level.